

Alberta Environment

CODE OF PRACTICE FOR EXPLORATION OPERATIONS

September 2005

made under the Environmental Protection and Enhancement Act

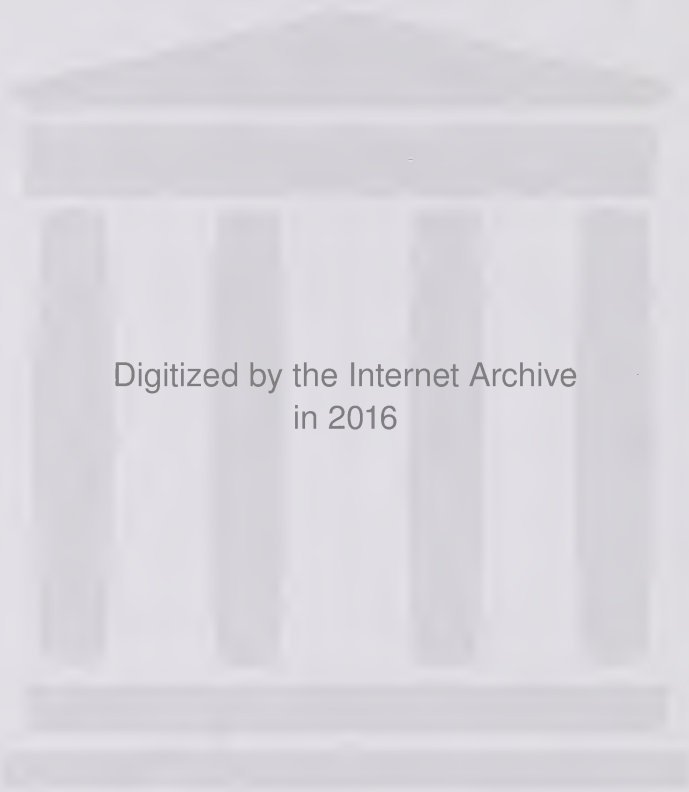
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ALBERTA ENVIRONMENT

CODE OF PRACTICE FOR EXPLORATION OPERATIONS (made under the *Environmental Protection and Enhancement Act*, RSA 2000, c.E-12, as amended and *Conservation and Reclamation Regulation* (AR 115/93), as amended)

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PART 1: DEFINITIONS

1.1 All definitions in the *Environmental Protection and Enhancement Act* and the regulations apply except where expressly defined in this Code of Practice.

1.2 In this Code of Practice:

- (a) **“Act”** means the *Environmental Protection and Enhancement Act*, R.S.A. 2000, c. E-12, as amended;
- (b) **“activities plan”** means the most recent plan for the conduct and reclamation of exploration operation activity that is submitted to the Director;
- (c) **“adit”** means a horizontal excavation for a mine entrance, or potential mine entrance, made in connection with a coal or oil sand exploration program;
- (d) **“bulk sample pit”** refers to an excavation established for the purposes of resource exploration and delineation, or soil testing;
- (e) **“cultivated land”** means land that:
 - (i) has been ploughed to prepare a seed bed for agricultural purposes, and
 - (ii) has an Ap horizon as defined in *The Canadian System of Soil Classification, 3rd Edition*, Publication 1646, published by Agriculture and Agri-Food Canada, 1998, as amended,

which includes, but is not limited to:

- (A) land under continuous and rotational cropping systems;
- (B) cultivated peatland;
- (C) hayland; and
- (D) grassland that has an Ap horizon and has successfully supported desired plant species;

(f) **“disposition”** means every instrument executed pursuant to the *Public Lands Act*, whereby

(i) any estate or interest in land of the Crown, or

(ii) any right or privilege in respect of land of the Crown that is not an estate or interest in land

is or has been granted or conveyed by the Crown to any person and, without derogating from the generality of sub clauses (i) and (ii), includes a conveyance, assurance, sale, lease, licence, permit, contract or agreement made, entered into, or issued pursuant to the *Public Lands Act*, but does not include a grant;

(g) **“disturbed land”** means any land on which the person conducting an exploration operation causes or permits to be conducted an activity that results in any disturbance, exposure, covering, erosion, degradation, or deterioration of the surface of the land in any manner;

(h) **“drill hole site”** means a site where drilling is conducted for the purpose of an exploration operation but does not include an oil production site;

(i) **“exploration operation”** means any investigation, work, or act to determine the presence of coal or oil sands by test drilling, excavation, or other means that results in surface disturbance or that may cause an adverse effect, but excludes any exploration operation that is the subject of a permit, license, or approval under the *Exploration Regulation* (AR 214/98);

(j) **“forested land”** means land that, before exploration or operation activities, is vegetated primarily with forest vegetation species;

(k) **“grassland”** means land that is permanently grassed and includes, but is not limited to:

(i) native prairie and grassland,

(ii) range improvement land as defined in *Dispositions and Fees Regulation* (AR 54/00),

- (iii) public land on which grazing dispositions or reserves have been issued, and
- (iv) land controlled by a Special Areas Board pursuant to the *Special Areas Act*;
- (l) “**notice**” means project-specific exploration operation information required pursuant to the Act and the regulations for the conduct or reclamation of an exploration operation;
- (m) “**oil sands exploration**” means exploration for oil sands in the areas designated as Oil Sands Areas by *Declaration of Oil Sands Areas to facilitate orderly leasing and stable regulation* (IL 84/07), (1984) published by the Alberta Energy and Utilities Board, as amended;
- (n) “**peatland**” means a permanent wetland or a wetland complex characterized by the accumulation of peat derived from plant material, and includes, but is not limited to:
 - (i) bogs,
 - (ii) fens,
 - (iii) swamps, or
 - (iv) contained areas of shall open water bodies;
- (o) “**public land**” means land of the Crown in right of Alberta to which the *Public Lands Act* applies;
- (p) “**regulations**” means regulations under the Act;
- (q) “**salvage**” means to collect topsoil and or subsoil in a manner that retains the original quality and quantity of the topsoil or subsoil for reclamation purposes;
- (r) “**sensitive areas**” means lands or associated features requiring enhanced protection including but not limited to:
 - (i) critical wildlife habitat,
 - (ii) rare and endangered plant species,

- (iii) native prairies,
- (iv) areas prone to erosion or other geotechnical failure, or
- (v) cultural heritage sites;
- (s) **“slope”** means the ratio of the horizontal run to the vertical rise measured in the same units;
- (t) **“stockpile”** means:
 - (i) a pile of topsoil, subsoil, overburden, or other material that is located at an exploration operation, or
 - (ii) to store topsoil, subsoil, overburden, or other material at an exploration operation

as applicable;

- (u) **“subsoil”** means the layer of soil directly below the topsoil, to a maximum depth of 1.2 metres below the topsoil surface, that consists of the B and C horizons as defined in *The Canadian System of Soil Classification, 3rd Edition*, Publication 1646, published by Agriculture and Agri-Food Canada, 1998, as amended;
- (v) **“surface water body”** means any surface location where water flows or is present, whether or not the flow or the presence of water is continuous, intermittent, or occurs only during a flood and includes, but is not limited to, wetlands;
- (w) **“this Code of Practice”** means the *Code of Practice for Exploration Operations*, published by the Department, as amended; and
- (x) **“topsoil”** means the uppermost layers of soil to a maximum depth of seventy (70) centimetres that consists of:
 - (i) all of the L, F, and H organic horizons,
 - (ii) the A and Bp mineral horizons, and

- (iii) the O organic horizon to a maximum depth of forty (40) centimetres

as defined in *The Canadian System of Soil Classification*, 3rd edition, Publication 1646, published by Agriculture and Agri-Food Canada, 1998, as amended.

PART 2: GENERAL

- 2.1.1 Any person who conducts or reclaims an exploration operation must do so in accordance with this Code of Practice.
- 2.1.2 The terms and conditions of this Code of Practice do not affect any rights or obligations created under any other authorization issued on behalf of the Department.
- 2.1.3 The terms and conditions of this Code of Practice are severable. If any term or condition of this Code of Practice or the application of any term or condition is held invalid, the application of such term or condition to the other circumstances and to the remainder of this Code of Practice shall not be affected by that invalidity.
- 2.1.4 Any person who conducts or reclaims an exploration operation shall immediately notify the Director in writing if any of the following events occur:
 - (a) that person is served with a petition into bankruptcy;
 - (b) that person files an assignment in bankruptcy or Notice of Intent to make a proposal;
 - (c) a receiver or receiver-manager is appointed;
 - (d) an application for protection from creditors is filed for the benefit of the person under any creditor protection legislation; or
 - (e) any of the assets which are the subject matter of this approval are seized for any reason.
- 2.1.5 If the person who conducts or reclaims an exploration operation monitors for any substances or parameters which are the subject of limits in this Code of Practice more frequently than is required, using procedures authorized in this Code of Practice, then the person who conducts or reclaims an exploration operation shall

provide the results of such monitoring as an addendum to the next reports required by this Code of Practice.

2.1.6 With respect to any soil sampling required pursuant to this Code of Practice, all samples shall be:

- (a) collected;
- (b) preserved;
- (c) stored;
- (d) handled; and
- (e) analysed

in accordance with procedures defined in *Soil Sampling and Methods of Analyses* (M.R. Carter, ed.) published by Canadian Society of Soil Science, 1993, as amended.

PART 3: NOTICE/ADMINISTRATION REQUIREMENTS

Section 3.1: Notice

3.1.1 A notice pursuant to s. 87 of the Act shall:

- (a) contain, at a minimum, all of the information specified in Schedule 1;
- (b) contain a detailed description of the operating procedures to be used in and adjacent to sensitive areas, including, but not limited to, a contingency plan to safeguard all sensitive areas; and
- (c) be provided to the Director a minimum of two (2) weeks prior to commencing conduct of the exploration operation.

3.1.2 A person who conducts or reclaims an exploration operation, shall inform the Director in writing:

- (a) within one (1) month after any change in the information in Schedule 1 provided in the notice; and

- (b) at least two (2) weeks prior to any change to the procedures regarding sensitive areas, required under 3.1.1(b).

Section 3.2: Written Consent of Registered Owners

- 3.2.1 No person shall commence or continue the conduct of an exploration operation on private land unless the written consent of all current registered owners of the land on which the exploration operation will be conducted has been obtained for the conduct of the exploration operation.

PART 4: OPERATIONAL REQUIREMENTS

Section 4.1: Activities Plan

- 4.1.1 No person shall commence or continue conduct or reclamation of any exploration operation unless an activities plan has been:
 - (a) prepared; and
 - (b) maintained current.
- 4.1.2 The activities plan in 4.1.1 shall contain, at a minimum, all of the information specified in Schedule 2.

PART 5: CONSERVATION AND RECLAMATION REQUIREMENTS

Section 5.1: Soil Conservation Requirements

Soil Salvage

- 5.1.1 No person shall conduct or reclaim any exploration operation unless all topsoil has been:
 - (a) salvaged from the area where the adit, trench, drill pad, access road, or bulk sample pit will be constructed;
 - (b) salvaged separately from subsoil; and
 - (c) stockpiled separately from subsoil.
- 5.1.2 Any person constructing an adit, trench, drill pad, access road, or bulk sample pit on:

- (a) cultivated land; or
- (b) grassland

shall salvage all subsoil.

5.1.3 Any person who constructs an adit, trench, drill pad, access road, or bulk sample pit on:

- (a) forested land; or
- (b) peatland

where the topsoil depth is less than fifteen (15) centimetres, shall:

- (i) salvage a total depth of fifteen (15) centimetres, and
- (ii) stockpile that soil as topsoil.

5.1.4 Notwithstanding 5.1.2 and 5.1.3, subsoil need not be salvaged where it is rated as 'unsuitable' according to the criteria described in the *Soil Quality Criteria Relative to Disturbance and Reclamation*, published by Alberta Agriculture, Food and Rural Development, 1987, as amended.

5.1.5 The person who conducts or reclaims an exploration operation shall record all salvage depths of all:

- (a) topsoil; and
- (b) subsoil.

Stockpiles

5.1.6 All material excavated during the construction of any:

- (a) adit;
- (b) trench;
- (c) drill pad;
- (d) access road; or
- (e) bulk sample pit

shall be stored in stockpiles until required for reclamation purposes.

- 5.1.7 No person shall stockpile any material excavated during the construction of any adit, trench, drill pad, access road, or bulk sample pit unless the material:
- (a) where it is topsoil, is stockpiled on topsoil;
 - (b) where it is subsoil, is stockpiled on an area from which all topsoil has been salvaged;
 - (c) where it is any material other than topsoil or subsoil, is stockpiled on an area from which all:
 - (i) topsoil, and
 - (ii) subsoilhave been salvaged; and
 - (d) is stockpiled a horizontal distance greater than three (3) metres from any other stockpile.
- 5.1.8 The requirement in 5.1.7 (d) does not apply where the stockpiles are composed of the same material.
- 5.1.9 The person who conducts or reclaims an exploration operation shall, until a self-sustaining vegetation cover is established, implement erosion control methods in disturbed areas that include, but are not limited to, the following:
- (a) slope stabilization;
 - (b) cross ditching;
 - (c) soil replacement; and
 - (d) reseedling.

Section 5.2: Reclamation Requirements

- 5.2.1 The person who conducts or reclaims an exploration operation shall complete all associated reclamation within two (2) full growing seasons following the anticipated completion date of the conduct of the exploration operation, as specified in the notice.

5.2.2 No person shall leave any of the following in any replaced topsoil:

- (a) rocks;
- (b) stones;
- (c) woody debris; or
- (d) other debris

that may interfere with the proposed land use set out in the Activities Plan.

5.2.3 The person who conducts or reclaims an exploration operation shall remediate areas where:

- (a) subsidence has occurred as a result of the exploration operation; and
- (b) the subsidence may affect the return of equivalent land capability.

5.2.4 On disturbed land, the person who conducts or reclaims an exploration operation shall:

- (a) backfill, grade, and contour disturbed areas to conform with the surrounding topography;
- (b) replace soil materials salvaged for reclamation; and
- (c) revegetate so that the re-established plant community is compatible with the land use intended by the landowner.

5.2.5 The person who conducts or reclaims an exploration operation shall apply for a reclamation certificate within three (3) full growing seasons following the anticipated completion date of exploration, as specified in the notice.

5.2.6 Clause 5.2.5 does not apply to an exploration operation occurring on land that is the subject of an approval issued pursuant to the Act for the construction, operation, and reclamation of a mine.

PART 6: WASTE MANAGEMENT REQUIREMENTS

- 6.1.1 The person who conducts or reclaims an exploration operation shall dispose of all drill hole waste in accordance with *Drilling Waste Management* (Guide G-50), published by the Alberta Energy and Utilities Board, 1996, as amended.

PART 7: REPORTING REQUIREMENTS

Contravention Report

- 7.1.1 In addition to any other reporting required pursuant to this Code of Practice, the Act, or the regulations under the Act, the person who conducts or reclaims an exploration operation shall immediately report any contravention of this Code of Practice to the Director:

- (a) by telephone at (780) 422-4505; or
- (b) by a method:
 - (i) in compliance with the release reporting provisions of the Act and the regulations, or
 - (ii) authorized in writing by the Director.

- 7.1.2 In addition to the immediate report under 7.1.1, the person who conducts or reclaims an exploration operation shall provide a report to the Director:

- (a) in writing; or
- (b) by a method:
 - (i) in compliance with the release reporting provisions of the Act and the regulations, or
 - (ii) authorized in writing by the Director,

within seven (7) calendar days of the reporting of the contravention, or within a time period specified in writing by the Director, unless the requirement to report is waived in writing by the Director.

7.1.3 The report required under 7.1.2 shall contain, at a minimum, the following information:

- (a) a description of the contravention;
- (b) the date of the contravention;
- (c) the duration of the contravention;
- (d) the legal land description of the location of the contravention;
- (e) an explanation as to why the contravention occurred;
- (f) the name of all current registered owners of the land on which the contravention occurred;
- (g) a summary of all preventive measures and actions that were taken prior to the contravention;
- (h) a summary of all measures and actions that were taken to mitigate any effects of the contravention;
- (i) a summary of all measures that will be taken to address the remaining adverse effects related to the contravention;
- (j) the date that notice was provided to the Director for the conduct or reclamation of the exploration operation;
- (k) the name of the person who was conducting or reclaiming the exploration operation at the time the contravention occurred;
- (l) the names, addresses, phone numbers, and responsibilities of all persons operating the exploration operation at the time the contravention occurred;
- (m) the names, addresses, phone numbers, and responsibilities of all persons who had charge, management, or control of the exploration operation at the time that the contravention occurred;
- (n) a summary of proposed measures that will prevent future contraventions including a schedule of implementation for these measures;

- (o) any information that was maintained or recorded under this Code of Practice, as a result of the incident; and
- (p) any other information required by the Director in writing.

Annual Report

- 7.1.4 In addition to any other reporting requirements pursuant to this Code of Practice, the Act, or the regulations, the person who conducts or reclaims an exploration operation shall produce a written report on an annual basis commencing one (1) year after the date of the notice.
- 7.1.5 The written report required in 7.1.4 shall contain, at a minimum:
 - (a) maps providing the locations and descriptions of: drill holes, adits, trenches, drill pads, access roads, and bulk sample pits; topsoil salvage depths, subsoil salvage depths; and other surface activity completed in the past year and proposed for the current year;
 - (b) a description of reclamation activities completed in the past year and proposed for the current year; and
 - (c) all topsoil and subsoil salvage depths recorded under 5.1.5.

Final Annual Report

- 7.1.6 The person who conducts or reclaims an exploration operation shall provide the final annual report to accompany the reclamation certificate application required in 5.2.5.

Providing Information on Request

- 7.1.7 Any person who is required to establish or record any information pursuant to this Code of Practice shall, upon request by an inspector or the Director, provide the information requested within seven (7) days or any other time period specified by the inspector or the Director.

PART 8: RECORD KEEPING REQUIREMENTS

- 8.1.1 The person who conducts or reclaims an exploration operation shall establish an operating record for the exploration operation.
- 8.1.2 The operating record in 8.1.1 shall contain, at a minimum:
- (a) all records that are required to be kept under this Code of Practice;
 - (b) all reports that are required to be prepared under this Code of Practice;
 - (c) a copy of any written consent pursuant to 3.2.1;
 - (d) notices submitted to the Director pursuant to 3.1.1;
 - (e) the activities plan pursuant to 4.1.1;
 - (f) all topsoil and subsoil salvage depths recorded under 5.1.5;
 - (g) all reports of inspections conducted by Alberta Environment;
 - (h) any correspondence sent to Alberta Environment;
 - (i) any dispositions issued pursuant to the *Public Lands Act*; and
 - (j) any approvals and licences issued pursuant to the *Water Act*.
- 8.1.3 Any records that are required by this Code of Practice shall be retained for a minimum of five (5) years from the date the reclamation certificate is issued for that exploration operation.

PART 9: CODE OF PRACTICE ADMINISTRATION

- 9.1.1 This Code of Practice will be reviewed as changes in technological or other standards warrant.

SCHEDULE 1

NOTICE INFORMATION

Pursuant to 3.1.1 of this Code of Practice, all of the following information shall be provided to the Director:

- (a) The name of the person who conducts or reclaims an exploration operation, and their address, phone number, facsimile number, and e-mail address;
- (b) The company name, if any, and the name, job title, address, phone number, facsimile number, e-mail address, and signature of the person who is submitting this notice;
- (c) The name, job title, address, phone number, facsimile number, and e-mail address of the person designated by the person who conducts or reclaims an exploration operation as the primary contact for the exploration operation;
- (d) The written consent of all registered owners of private land on which the exploration operation will be conducted for the purposes of the conduct of that activity and the provision of the consent to the Department;
- (e) For all land on which a drilling program will be conducted, the following shall be provided:
 - (i) the municipal address, where one exists;
 - (ii) the legal land description (LLD);
 - (iii) the names, addresses, and phone numbers of all current registered owners of the lands affected by the exploration operation;
 - (iv) the names, addresses, and phone numbers of the current occupant(s) of the lands affected by the exploration operation; and
 - (v) the location of known sensitive areas, if any, within the lands affected by the exploration operation;

- (f) For all land on which any adit, trench, drill pad, access road, or bulk sample pit will be constructed, the following shall be provided:
- (i) the municipal address, where one exists;
 - (ii) the legal land description (LLD);
 - (iii) the names, addresses, and phone numbers of all current registered owners of the land;
 - (iv) the names, addresses, and phone numbers of the current occupant or occupants of the land;
 - (v) the total area measured in hectares to be disturbed;
 - (vi) the total volume measured in cubic metres of any coal and oil sands to be removed; and
 - (vii) the location and summary of the environmental setting of all sensitive areas that fall on or adjacent to the land on which the exploration operation is to be conducted;
- (g) The anticipated start date and completion date of the conduct of the exploration operation; and
- (h) The signature of the person who conducts or reclaims the exploration operation and the date that the signature was made.

SCHEDULE 2

ACTIVITIES PLAN

The Activities Plan must cover the expected life of the exploration operation, and must meet the objective of equivalent land capability specified in the *Conservation and Regulation*, A.R. 115/93, as amended.

Pursuant to 4.1.2 of this Code of Practice, all of the following information shall be included in the Activities Plan:

- (a) One or more 1:10 000, or larger, scale drawings or maps which describe the proposed area of the exploration operations, including, but not limited to, the following information:
 - (i) township, range, and section lines;
 - (ii) property boundaries;
 - (iii) land ownership, including any occupants and lessees;
 - (iv) current land use;
 - (v) land currently covered by a surface disposition under the *Public Lands Act*, including, but not limited to, Mineral Surface Leases, Licenses of Occupation, Grazing Leases, and Natural Areas;
 - (vi) the location of areas where exploration will be conducted;
 - (vii) the area disturbed to date, including:
 - (A) all disturbances developed through previous exploration operations conducted by the person who conducts or reclaims an exploration operation in the area of the current exploration operation; and
 - (B) the reclamation status of exploration operations that have not yet received reclamation certification;

- (viii) the location of proposed drill hole sites, individually numbered, and if applicable, future lines of drilling in the event the exploration operation extends over more than one (1) year;
 - (ix) the location, nature, and extent of existing and proposed infrastructure including, but not limited to, the following:
 - (A) access roads;
 - (B) trails; and
 - (C) any other existing features which will be affected by activity during the exploration operation including, but not limited to, private works, public works, oil wells, gas wells, and pipelines;
 - (x) the location and type of campsites, air landing strips, helicopter pads, or any other proposed activity or surface disturbance related to the exploration operation;
 - (xi) the location of all unstable areas that may be affected by the exploration operation;
 - (xii) vegetation cover type;
 - (xiii) surface water bodies;
 - (xiv) drainage; and
 - (xv) the location and type of all water crossings; and
- (b) A description of the proposed exploration operation including, but not limited to, the following:
- (i) the time schedule of the exploration operation listing drill hole locations;
 - (ii) a summary of any land use planning policies and regulations including, but not limited to, municipal plans and land use bylaws, Eastern Slopes Zoning, Integrated Resource Plans, and Wildlife Management Plans in effect in the area;

- (iii) a description of the type of drilling and support equipment to be used;
- (iv) a description of procedures to be used to contain and dispose of drilling fluids and cuttings;
- (v) a description of the operating procedures to be used in sensitive areas, including, but not limited to, the contingency plan to safeguard sensitive areas;
- (vi) a description of the nature and extent, including area or length as appropriate, of any clearing and disturbance associated with drill sites, new access routes, existing access routes, and any other activity required for the exploration operation;
- (vii) a description of topsoil salvage, or handling procedures;
- (viii) a description of proposed reclamation procedures and time scheduling for interim and permanent reclamation;
- (ix) a description of anticipated reclaimed land conditions;
- (x) a description of how the proposed siting of access roads and drill sites will avoid unstable or steep slopes adjacent to watercourses or water bodies;
- (xi) a description of how road gradients will be designed to protect against erosion;
- (xii) a description of techniques that will be used to prevent wind erosion;
- (xiii) a description of techniques that will be used to prevent water erosion;
- (xiv) a description of the seed mixtures or other forms of vegetative material proposed to be used to revegetate disturbed areas;
- (xv) a description of when the person who conducts or reclaims an exploration operation will suspend conduct or reclamation of the exploration operation where conditions exist that cause or may cause an adverse effect to land or

water bodies, including, but not limited to, the following:

- (A) erosion;
 - (B) sedimentation of any watercourse or water body;
or
 - (C) mixing, loss, or degradation of topsoil; and
- (xvi) a description of the method for the person who conducts or reclaims an exploration operation to notify the Director when conduct or reclamation of the exploration operation are suspended or recommenced.



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